



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,603	11/03/2004	Gerhard Nestler	260740US0PCT	5700
22850	7590	02/13/2006	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			CHOI, LING SIU	
			ART UNIT	PAPER NUMBER
			1713	
DATE MAILED: 02/13/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/511,603		NESTLER ET AL.	
	Examiner		Art Unit	
	Ling-Siu Choi		1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/3/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is in response to the Preliminary Amendment filed November 3, 2004. Claims 1-10 are now pending, wherein claims 1-6 are drawn to a process to prepare a low-odor hydrogel-forming acrylic acid polymer; claim 7 is drawn to a method to prepare a low-odor hydrogel-forming acrylic acid polymer; claim 8 is drawn to hydrogel-forming addition polymer; claim 9 is drawn to a method to prepare a hygiene article; claim 10 is drawn to a hygiene article. And **claims 1 and 7 are independent claims.**

Claim Objections

2. Claims 1-6 and 8-10 are objected to because of the following informalities: (a) claim 1, line 11, "characterized by the acrylic acid used in step a) containing" is suggested to be changed to --wherein the acrylic acid used in step a) contains-- and (b) claim 1, lines 9-10, "volatile saturated carboxylic acids selected from the group consisting of acetic acid and propionic acid" is suggested to be changed -- volatile saturated carboxylic acid(s) selected from the group consisting of acetic acid, propionic acid, and a combination thereof --.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

Art Unit: 1713

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

4. Claims 1, 4-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Irie et al. (US 6,388,000 B1).

A process to prepare a low-odor hydrogel-forming acrylic acid polymer, comprising the steps of	
A	(i) preparing a polymeric hydrogel by free-radically polymerizing a monomer composition comprising at least 50 wt% of acrylic acid in an aqueous polymerization medium and (ii) converting the hydrogel into a particulate hydrogel or into hydrogel-forming powder; and optionally
B	treating the particulate hydrogel or the hydrogel-forming powder with a crosslinking substance which, actually or latently, contain at least two functional groups capable of reacting with the carboxyl groups on the addition polymer
wherein the acrylic acid used in step A contains less than 400 ppm by weight, based on acrylic acid, of volatile saturated carboxylic acids selected from the group consisting of acetic acid and propionic acid	

(summary of claim 1)

A method to prepare a low-odor hydrogel-forming acrylic acid polymer comprising

using a acrylic acid having a **propionic acid** and **acetic acid** content of **less than 400 ppm** as a starting material

(summary of claim 7)

Irie et al. disclose a method to prepare an absorbent resin, comprising the steps of preparing a water-soluble unsaturated monomer having a ratio of neutralization in the range of 30-100 mol % and containing 50-100 mol % of an acrylate; then polymerizing the monomer in the presence of a first cross-linking agent in an amount of 0.005-5 mol%, based on the amount of monomer; and pulverizing and/or granulating to obtain powdered absorbent resin, wherein the water-soluble unsaturated monomer having β -hydroxy **propionic acid** content of **not more than 300 ppm** and the cross-linking agent contains at least two functional groups (abstract; cross-linking agent: col. 10, lines 51-67 and col. 11, lines 1-23; claims 1 and 3). Irie et al. further disclose that the absorbent resin is used in the fields of **hygienic materials** (col. 1, lines 63-64). Thus, the present claims are anticipated by the disclosure of Irie et al.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1713

6. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saxer et al. (US 5,504,247) in view of Saxer et al. (US 5,504,247).

The disclosure of Irie et al. is adequately set forth in paragraph 4 and is incorporated herein by reference.

The difference between the present claims and the disclosure of Irie et al. is the requirement of (a) a specific crude acrylic acid to be used in the present invention and (b) a specific process to purify the crude acrylic acid to be adapted in the present invention.

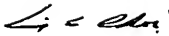
Saxer et al. disclose the crude acrylic acid having 0.250% of acetic acid and 0.021 % of propionic acid is purified by a fractional crystallization to lead to a purified acrylic acid having 0.018 % of acetic acid and 0.005% of propionic acid , wherein the fractional crystallization comprises a cooling from [5 to -5°C] to about [-10 to -25°C] in the dynamic crystallization step and a cooling from [0 to -15°C] to [-30 to -15°C] in the static crystallization step (Table 4). Saxer et al. further disclose that the purification method can reduce the amount of residues to be disposed of and increasing the output of pure acrylic acid (col. 2, lines 27-32). In light of such benefits, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the method disclosed by Saxer et al. in the disclosure of Irie et al. because Irie et al. recognize to use the purified acrylic acid and obtain the present invention.

Conclusion

Art Unit: 1713

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling-Siu Choi whose telephone number is 571-272-1098.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on 571-272-1114.


LING-SUI CHOI
PRIMARY EXAMINER

February 5, 2006